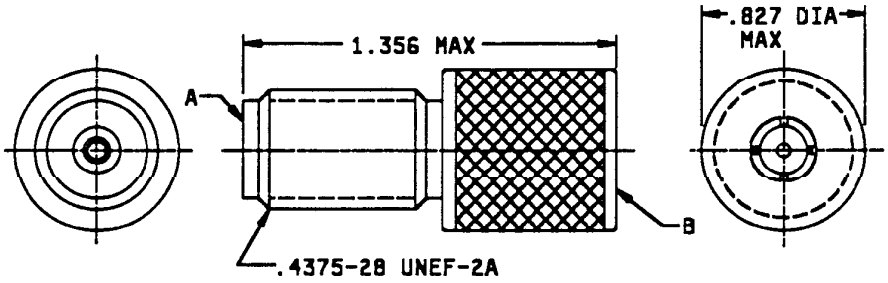
NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed. but will be changed the next time this document is revised.

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, (BETWEEN SERIES TNC TO SERIES N), CLASS 2, STRAIGHT PLUG

This specification sheet is approved for use by the Air Force Logistics Command (AFLC/LOIE), Department of the Air Force, and i s available for use by all Departments and Agencies of the Department of Defense

The complete requirements for procuring the adapter described herein shall consist of this document and the latest issue of Specification MIL-PRF-55339

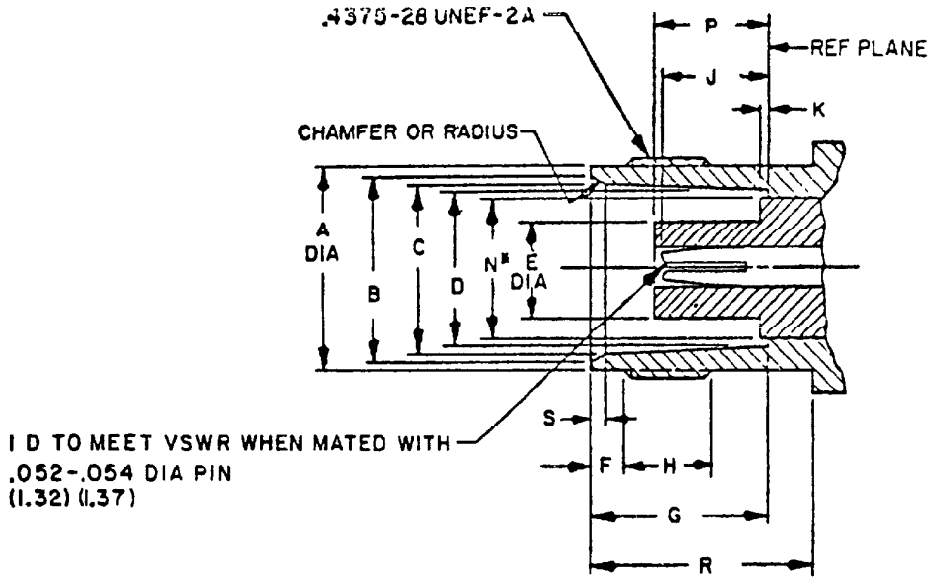


Reference	Series	Contact	Figure
A	TNC	Socket	2
B	N	Pin	3

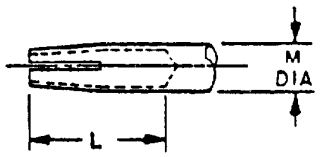
INCHES	MM
.827	21.01
1.356	34.44

NOTES:
1. Dimensions are in inches
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. All undimensioned pictorial representations are for reference purposes only.

FIGURE 1. General configuration.



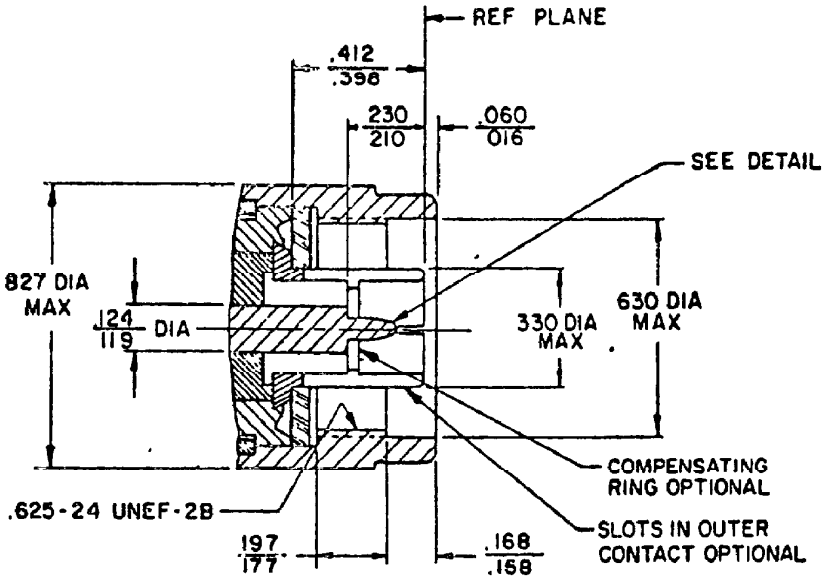
Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	.378	.381	9.60	9.68
B	.345	.356	8.76	9.04
C	.327	.333	8.31	8.46
D	.319	321	8.10	8.15
E	- - -	.186	- - -	4 72
F	.068	.088	1.73	2.24
G	.329	.333	8.36	8.46
H	.187	- - -	4.75	- - -
J	.186	.206	4 72	5 23
K	- - -	.006	- - -	15
L	.195	- - -	4.95	- - -
M	.081	.087	2.06	2 21
N	- - -	. 256	- - -	6.50
P	.188	208	4 78	5 28
R	.415	- - -	10 54	- - -
S	.015	030	38	76

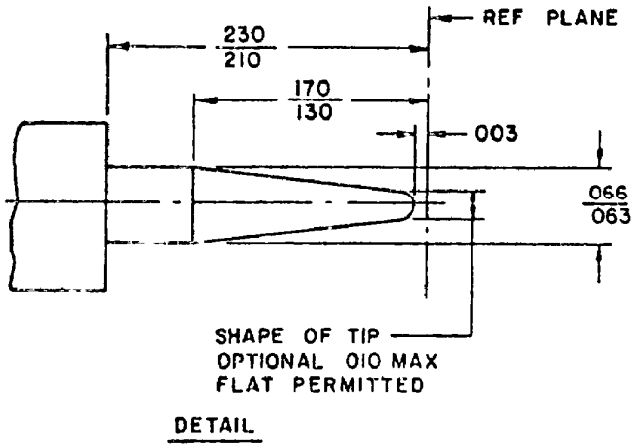


*N dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension K

NOTES:
1. Metric equivalents are given for general information only and are based upon 1.00 inch = 25 4 mm
2. All undimensioned pictorial configurations are for reference purposes only

FIGURE 2. Mating dimensions for socket terminations.





DETAIL

INCHES	MM
.003	.08
.010	.25
.016	.41
.060	1.52
.063	1.60
.066	1.68
.119	3.02
.124	3.15
.130	3.30
.158	4.01
.168	4.27
.170	4.32
.177	4.50
.197	5.00
.210	5.33
.230	5.84
.330	8.38
.398	10.11
.412	10.46
.625	15.88
.630	16.00
.827	21.01

NOTES:
1. Dimensions are in inches.
2. Three holes .027 (69 mm) minimum diameter, equally spaced, are required for safety wiring after mating. Location on coupling nut optional.
3. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
4. All undimensioned pictorial representations are for reference purposes only.
5. Outer contact shall have a minimum of four slots.

FIGURE 3. Mating dimensions for N pin contact terminations.

DESIGN AND CONSTRUCTION:

General configuration: See figure 1.

Impedance: 50 ohms, nom.

Working voltage: Sea level - 500 Vrms.
70,000 feet - 125 Vrms.

Frequency range: .5 to 11 GHz.

Temperature range: -65° to +165°C.

PERFORMANCE (installation torque of 6 to 10 in. lb, series N).

Dimensions: See figures 1, 2, and 3.

Center contact retention:	Series TNC	Series N
Axial force (lb, min)	6	6
Torque (in. oz, min)	N/A	N/A

Force to engage and disengage:	Series TNC	Series N
Longitudinal force (lb, max)	3.2	N/A
Torque (in. lb, max)		6.0

Coupling proof torque: 15 in. lb, min, series N.

Mating characteristics, series TNC:
- Center contact (socket):
  - Oversize test pin dia - .057 in., min.
    - Insertion depth - .125 in., min.
    - No. of insertions - 1.
  - Max test pin (insertion force test), series TNC.
    - Steel test pin dia - .054 in., min.
    - Pin finish - 16 microinches.
    - Insertion force - 2 lb, max.
    - No. of insertions - 1
  - Min test pin (withdrawal force), series TNC:
    - Steel test pin dia - .052 in, max.
    - Pin finish - 16 microinches.
    - Withdrawal force - 2 oz, min.
    - No. of withdrawals - 1.
  - Outer contact, series N:
    - Min test pin ID - .316 in, max.
      - Pin finish - 16 microinches.
      - Insertion force - 25 lb, max.
      - Insertion depth - .093 in., min.
      - No. of insertions - 1.
    - Slotted member contacts only, series N.
    - Max test ring ID - .324 in., min
      - Test ring finish - 16 microinches.
      - Insertion depth - .031 in , max.
      - No. of insertions - 1.

Permeability: <2.0.

Seal: Hermetic - Not applicable.
Pressurized - Not applicable.
Weatherproof - Not applicable.

Insulation resistance: 5,000 megohms, min.

VSWR: 1.35:1, max at .5 to 9 GHz. 1.5 max at 9 to 11 GHz.

RF leakage (total): -60 dB, min, 2 to 3 GHz.

RF insertion loss: $.060\sqrt{F\ (GHz)}$ dB max, tested at 6 GHz.

Durability: 500, min.
Rate: 12 c/m, min.

Dielectric withstanding: Test voltage - 1,500 Vrms, min (sea level).

Contact resistance (milliohms, max):

Contact	Initial	After
Center	2.0	2.5
Outer	.25	N/A

Vibration, high frequency. Interruptions - 1 µs, max. Test condition D.

Shock: Test condition I.

Thermal shock: Test condition C.

Moisture resistance. 200 megohms, min.

Corona level: Voltage - 375 V, min.
Altitude - 70,000 feet, min.

RF high potential withstanding voltage: RF voltage - 1,000 Vrms, min.
Frequency - 5 MHz, to 7.5 MHz.

Salt spray (corrosion): Applicable.

Coupling mechanism retention force 100 lb, min, series N.

MARKING: As specified in MIL-A-55339.
Part No. M55339/51-00001.

Custodian:
Air Force - 85

Review activities:
Air Force - 11, 99
DSA - ES

User activities:
Air Force - 19

Preparing activity:
Air Force - 85

Agent:
DSA - ES

(Project 5935-F088-1)

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